

Claims

1. A method for providing control of a set-top box with infrared (IR) signals, comprising the steps of:

providing an IR control database residing on a mass storage system,  
5 wherein said IR control database contains at least one IR control entry;

providing an IR control packet, wherein said IR control packet is generated from a first IR control entry of said IR control database; and

controlling said set-top box with said IR control packet.

2. The method of Claim 1, further comprising the steps of:

10 generating said IR control packet containing an IR control waveform from an IR waveform specification of said first IR control entry; and

transmitting said IR control packet, based upon said IR control waveform, to said set-top box;

15 wherein said first IR control entry of said IR control database contains said IR waveform specification.

3. The method of Claim 2, wherein said transmitting step further comprises providing multiplexed serial transmission of said IR control packet based upon said IR control waveform to said set-top box.

20 4. The method of Claim 2, wherein said transmitting step further comprises providing queued multiplexed serial transmission of said IR control packet based upon said IR control waveform to said set-top box.

5. The method of Claim 1, further comprising the steps of:

receiving an IR control entry to create a received IR control entry; and

25 inserting said received IR control entry to create said first IR control entry of said IR control database.

6. The method of Claim 5, further comprising the steps of:  
providing a raw IR control library residing on said mass storage system,  
wherein said raw IR control library contains a first raw IR control entry;  
parsing said first raw IR control entry of said raw IR control library to  
5 create a processed first IR control entry; and  
communicating said processed first IR control entry to create said first IR  
control entry of said IR control database.

7. The method of Claim 6, further comprising the step of:  
providing a raw IR control packet, wherein said IR control packet is  
10 generated from said first raw IR control entry of said raw IR control library;  
wherein said controlling step controls said set-top box by transmission of  
said raw IR control packet.

8. The method of Claim 6, further comprising the steps of:  
providing a prototype IR control database residing on said mass storage  
15 system, wherein said prototype IR control database contains a first prototype IR  
control entry;  
performing a control code search to access said prototype IR control  
database to select a first prototype IR control entry; and  
generating from said first IR control entry said first raw IR control entry of  
20 said raw IR control library.

9. The method of Claim 8, further comprising the step of:  
providing a timing interface wherein said first IR control packet is  
generated from said first prototype IR control entry of said prototype IR control  
database.

10. The method of Claim 6, further comprising the steps of:  
providing a corrections-additions database residing on said mass storage  
system, wherein said corrections-additions database contains a first correction  
data entry; and

parsing said first correction data entry and said first raw IR control entry to create said processed first IR control entry.

11. The method of Claim 6, wherein said system contains a first computer and a second computer;

5 wherein said mass storage system contains a first mass storage system coupled to said first computer and a second mass storage system coupled to said second computer;

10 wherein said IR control database includes a first instance of said IR control database residing on said first mass storage system coupled to said first computer;

wherein said receiving step creates said received first IR control entry at said first computer;

15 wherein said insertion step inserts said received first IR control entry at said first computer to create said first IR control entry of said first instance of said IR control database residing on said first mass storage system;

wherein said raw IR control library resides on said second mass storage system containing said first raw IR control entry;

wherein said library parsing step creates said processed first IR control entry by said second computer; and

20 wherein said communication step communicates said processed first IR control entry by said second computer to create said first IR control entry of said IR control database.

12. The method of Claim 11, wherein said system further includes a server computer system;

25 wherein said receiving step creates a received first IR control entry by said server computer system; and

said communication step includes the steps of:

providing communication of said processed first IR control entry by

09558410-042400

said second computer to create said first IR control entry by said server computer system; and

providing communication of said processed first IR control entry by said server computer system to create said first IR control entry of said first instance of said IR control database by said first computer.

13. The method of Claim 6, wherein said first IR control entry of said IR control database includes a first IR control syntax specification.

14. The method of Claim 13, wherein said first IR control syntax specification includes a number of digits in a channel specification.

15. The method of Claim 13, wherein said first IR control syntax specification entry includes a delimiter specification ending an IR transmission.

16. The method of Claim 13, wherein said first IR control syntax specification entry includes a delay specification between digits of an IR transmission.

17. The method of Claim 13, wherein said first IR control syntax specification entry includes a prefix specification.

18. The method of Claim 17, wherein said prefix specification includes an A/B switch prefix selection.

19. The method of Claim 17, wherein said prefix specification includes an A/B/C switch prefix selection.

20. An apparatus for providing control of a set-top box with an IR signal, comprising:

a mass storage system;

an IR control database residing on said mass storage system wherein said IR control database contains at least one IR control entry;

an IR control packet, wherein said IR control packet is generated from a first IR control entry of said IR control database; and

a transmitter that controls said set-top box by transmitting said IR control packet thereto.

21. The apparatus of Claim 20, said IR control packet further comprising:

an IR control waveform based upon an IR waveform specification of said first IR control entry;

wherein said IR control packet is transmitted to said set-top box based upon said IR control waveform.

22. The apparatus of Claim 21, wherein said transmitter provides multiplexed serial transmission of said IR control packet to said sat-top box based upon said IR control waveform.

23. The apparatus of Claim 21, wherein said transmitter provides queued multiplexed serial transmission of said IR control packet to said set-top box based upon said IR control waveform.

24. The apparatus of Claim 20, further comprising:

means for comprising a received IR control entry based upon reception of an IR control entry; and

means for comprising said first IR control entry of said IR control database based upon insertion of said received IR control entry to create.

25. The apparatus of Claim 24, further comprising:

a raw IR control library residing on said mass storage system, wherein said raw IR control library contains a first raw IR control entry;

means for parsing said first raw IR control entry of said raw IR control library to create a processed first IR control entry; and

means for communicating said processed first IR control entry to create said first IR control entry of said IR control database.

26. The apparatus of Claim 25, further comprising:

a raw IR control packet, wherein said IR control packet is generated from said first raw IR control entry of said raw IR control library; and

wherein said control provides control to said set-top box by transmission of said raw IR control packet.

27. The apparatus of Claim 25, further comprising:

a prototype IR control database residing on said mass storage system containing a first prototype IR control entry;

means for performing a control code search access on said prototype IR control database to select a first prototype IR control entry; and

means for generating from said first IR control entry said first raw IR control entry of said raw IR control library.

28. The apparatus of Claim 27, further comprising:

a timing interface, wherein said first IR control packet is generated from said first prototype IR control entry of said prototype IR control database.

29. The apparatus of Claim 25, further comprising:

a corrections-additions database residing on said mass storage system, said corrections-additions database containing a first correction data entry; and

means for parsing said first correction data entry and of said first raw IR control entry to create said processed first IR control entry.

30. The apparatus of Claim 25, wherein said system further comprises a first computer and a second computer;

wherein said mass storage system further comprises a first mass storage system coupled to said first computer and a second mass storage system coupled to said second computer;

wherein said IR control database comprises a first instance of said IR control database residing on said first mass storage system coupled to said first computer;

wherein said receiving creates said received first IR control entry at said first computer;

wherein said insertion inserts said received first IR control entry at said first computer to create said first IR control entry of said first instance of said IR control database residing on said first mass storage system;

wherein said raw IR control library resides on said second mass storage system containing said first raw IR control entry;

wherein said library parsing creates said processed first IR control entry by said second computer; and

wherein said communication communicates said processed first IR control entry by said second computer to create said first IR control entry of said IR control database.

31. The apparatus of Claim 30,

wherein said system further comprises a server computer system;

wherein said receiving creates a received first IR control entry by said server computer system; and

wherein said communication comprises:

communication of said processed first IR control entry by said second

computer to create said first IR control entry by said server computer system; and

communication of said processed first IR control entry by said server

computer system to create said first IR control entry of said first instance of said IR control database by said first computer.

32. The apparatus of Claim 25, wherein said first IR control entry of said IR control database comprises a first IR control syntax specification.

33. The apparatus of Claim 32, wherein said first IR control syntax specification comprises a number of digits in a channel specification.

5 34. The apparatus of Claim 32, wherein said first IR control syntax specification entry comprises a delimiter specification ending an IR transmitter.

35. The apparatus of Claim 32, wherein said first IR control syntax specification entry comprises a delay specification between digits of an IR transmitter.

10 36. The apparatus of Claim 32, wherein said first IR control syntax specification entry comprises a prefix specification.

37. The apparatus of Claim 36, wherein said prefix specification includes an A/B switch prefix selection.

15 39. The apparatus of Claim 36, wherein said prefix specification includes an A/B/C switch prefix selection.

39. A program storage medium readable by a computer, tangibly embodying a program of instructions executable by the computer to perform a method for controlling a set-top box with an IR signal, said method comprising the steps of:

20 providing an IR control database for residence on a mass storage system;  
providing reception of an IR control entry to create a received IR control entry;

providing insertion of said received IR control entry to create said first IR control entry of said IR control database;

25 providing an IR control packet, wherein said IR control packet is generated from a first IR control entry of said IR control database;



providing control to said set-top box by serial transmission of said IR control packet;

providing a raw IR control library residing on said mass storage system, wherein said raw IR control library contains a first raw IR control entry;

5 parsing said first raw IR control entry of said raw IR control library to create a processed first IR control entry;

communicating said processed first IR control entry to create said first IR control entry of said IR control database;

10 providing a corrections-additions database residing on said mass storage system, wherein said corrections-additions database contains a first correction data entry; and

parsing said first correction data entry and said first raw IR control entry to create said processed first IR control entry, wherein said IR control database contains at least one IR control entry.

004240-042400